THE

SCATER

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U.S.A. Nationals - 1967

The following is only a brief, partial description of what happened this year at Los Alamitos Your reporter couldn't be there for the entire week so missed a lot of the action.

The weather was quite good as is usual for Calif. The Navy hosts were quite hospitable and everything seemed to run pretty smoothly. (relatively speaking) There always seems to be peculiar parking regulations particularly on Saturday and Sunday but once anticipated they can be coped with.

Event scheduling seemed to have gone awry on Wednesday, with ½A gas and A-1, A-2 combined on the same day. There just weren't enough timers available to adequately handle the large numbers of entries in these events. Long lines stretched out and it took about an hour to an hour and a quarter to get a timer. This was especially frustrating to the many Juniors who fly these events. After waiting 1¼ hours in line some young fliers couldn't start their ½A engines in the 3 minutes permitted and had to go back to the end of the line.

The 3 minute limit did not seem to be a long enough period to

make the contest much more than a game of chance. That is if your 3 minutes came up the same time the thermal did, you were in, if not, too bad.

One wonders, if the limit had been only 1 minute would the lines have been much shorter? And conversely if the limit had been 5 minutes could the lines have been much longer?

During the worst part of the Nordic waiting, requests were made for non Navy timer volunteers. Some responded but it is not known to this reporter how much help this made or what every body thought of this idea.

John O'Donnell told us about the English Nats system in which complete reliance is placed on the competitor providing his own timer. This would certainly relieve the Navy of a lot of bother at our Nats but I haven't found any enthusiasm here for this idea. Anyone have any comments on this proposal?

Well anyway some good times were made by some hard working contestants as shown by the following short list:

Nordic Open

1.	Carl Redlin	26:30
2.	Dennis Bronco	22:14
3.	Kenny Happersett	15:44
4.	Charles Sotich	14:00
5.	John O'Donnell	13:56

FAI Power Open

1.	Bob Cherny	23:20
2.	Bob Sifleet	17:45
3.	Doug King	17:00
4.	Paul Kellas	14:40
5.	Jim Trego	14:26

Wake Open

1.	John Allen	15:00
2.	Joe Bilgri	14:35
3.	Ric Choate	14:05
4.	Reid Simpson	14:04
5.	Harry Johnson	13:42
6.	Brian Donn	13:39

Unlim. Rubber Open

1.	Dennis Bronco	34:01
2.	Hank Cole	19:06
3.	Herb Shields	18:40
4.	Bud Romak	18:39
5.	Willard Smitz	18:25
6.	Joe Bilgri	18:19
7.	Carl Redlin	14:49
8.	John O Donnell	14:35

Brian Van Nest won 2nd in ½A gas Junior, and 3rd in Nordic A-2 Junior. Jet Trego won 2nd in Nordic A-2 Junior and 12th in ½A gas Junior.

Congratulations to the winners and we are sorry we can't list more complete results.

John O'Donnell and his charming bride were in attendance having come over to visit the Colonies. They were chaperoned by the Frank Monts family. John had 10 airplanes with him that all fit into a rather small box. In spite of the 10 airplanes and an impossibly heavy looking winder, the O'Donnell's did not exceed the airlines baggage weight limitations. This speaks more for the sacrifices of Mrs O'Donnell than it does for John's. Congratulations to you both and we hope you had an enjoyable visit.

Perhaps some of you are wondering why there are no Scat names high up in the winners lists? Well perhaps we are wondering too but the following brief description might do for starters.

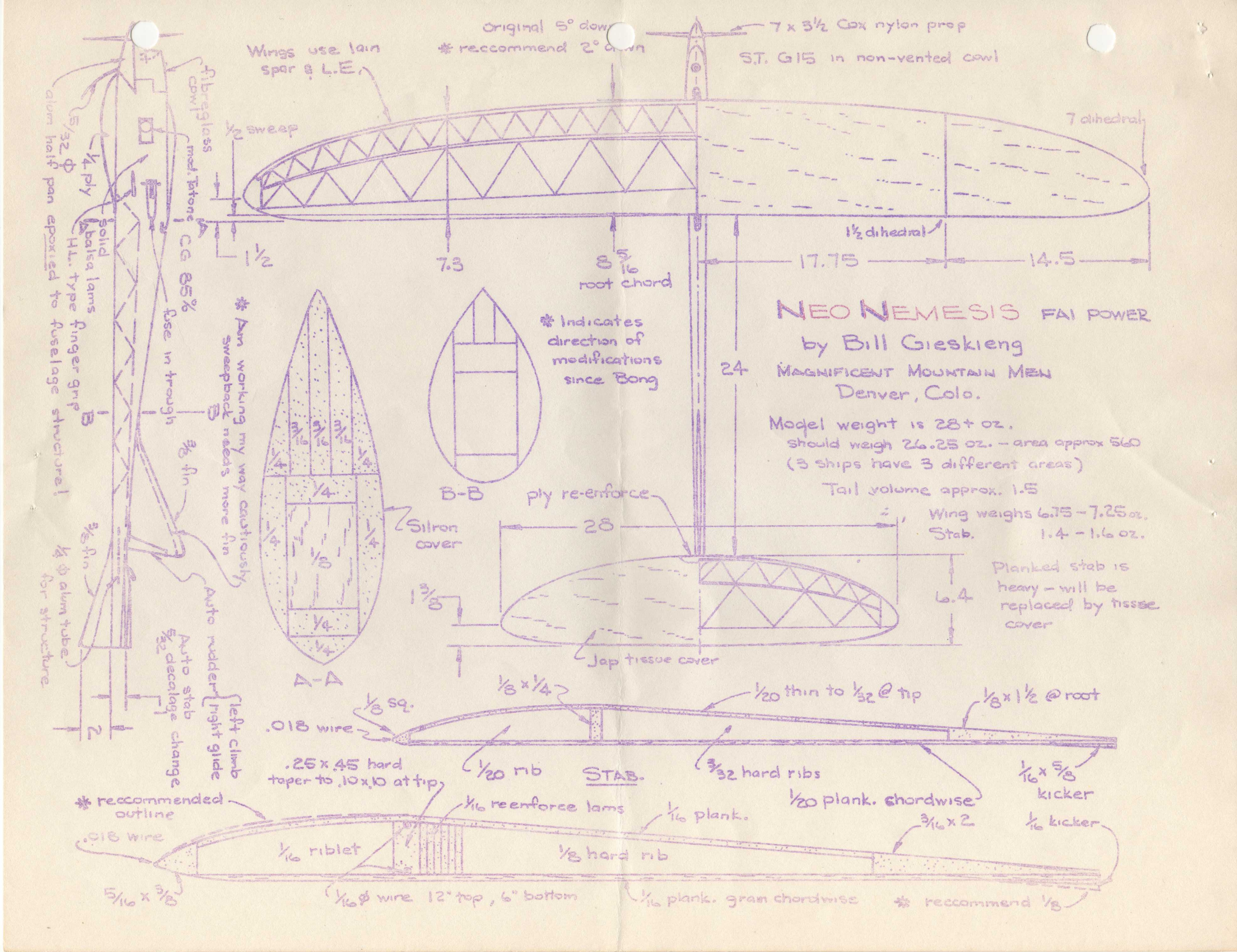
Gildersleeve blew a motor in Unlimited Rubber at about 60', for the first flight, wiping him out. Sykora folded a wing on launch. Hartill had destroyed his unlimited at Taft the week before on its first test flight. (300 sq. in. wing, 3/32 sq. longerons, 3¼ oz. empty weight, 24 in. prop. etc.) He painstakingly had rebuilt it and at the Nats one test flight Sat. morning looked great. First official got away in a beautiful climb, glided into a great thermal and after 3½ minutes at about 1000 ft. altitude it collided with a B gas job. The wing popped off and the rest did a death dive to the ground. Ugh! Well this may give you an idea.

We apologize for the incomplete Nats' results. They should soon be available in the other magazines however.

FAI Power Flying in Denver - Bill Gieskieng

At long last Scatter brings you the latest secrets from one of the hottest FAI Power fliers we know. Besides that Bill is one heck of a nice guy, an "organization" man, a newsletter editor and in addition he is on good terms with one of the best looking (make that, the best looking) FAI power flier in the sport. (Annie G.)

"Neo Nemesis is the fifth FAI design change I've made since 1964 and it certainly won't be the last. My first ships were sluggish in the climb and the Nemesis series was a healthy reaction to the altitude problem. With nitro they really came into their own but I'm afraid their potential is lost with straight fuel. With a clean


Original 5° dow
* reccommend 2° down
7 x 3½ Cox nylon prop
S.T. G15 in non-vented cowl
Wings use lain spar & L.E.
½ sweep
7 dihedral
1½ dihedral
1½
7.3
8 5/16 root chord
17.75
14.5
24
NEO NEMESIS FAI POWER
by Bill Gieskieng
MAGNIFICENT MOUNTAIN MEN
Denver, Colo.
Model weight is 28+ oz.
should weigh 26.25 oz. – area approx 560
(3 ships have 3 different areas)
Tail volume approx. 1.5
Wing weighs 6.75 – 7.25 oz.
Stab. 1.4 – 1.6 oz.
Planked stab is heavy – will be replaced by tissue cover
* Indicates direction of modifications since Bong
* Arm working my way cautiously sweepback needs more fin
fibreglass cowl
mod. Tatone
CG 85%
fuse in trough
5/32 ϕ alum half pan epoxied to fuselage structure!
¼ ply
solid balsa lams
H.L. type finger grip
3/8 fin
5/16 fin
¼ ϕ alum tube for structure
Auto rudder
Auto stab decalage change
left climb
right glide
B
B-B
A-A
3/16
¼
⅛
Silron cover
ply re-enforce
28
1 3/8
6.4
Jap tissue cover
⅛ sq.
.018 wire
.25 x .45 hard taper to .10 x .10 at tip
1/8 x 1/4
1/20 thin to 1/32 @ tip
1/8 x 1½ @ root
1/20 rib
STAB.
3/32 hard ribs
1/20 plank. chordwise
1/16 x 5/8 kicker
* reccommended outline
.018 wire
1/16 riblet
1/16 reenforce lams
1/16 plank.
⅛ hard rib
3/16 x 2
1/16 kicker
5/16 x 3/8
1/16 ϕ wire 12" top, 6" bottom
1/16 plank. grain chordwise
* reccommend ⅛

engine run, they are still faster than most ships but don't reach the velocity where the streamlining really pays off. One pain in the neck is the auto rudder. With nitro I would cut it in after the engine floods and ship would gain another twenty feet for a smooth transition. With straight fuel and slower speeds, I was cutting it in one second before the engine quit; otherwise, it would have no effect! This cutting in early was very hairy because often when climb was a little shallow and speed was up, the rudder would barrel roll the plane on its side and it would lose 50 to 100 ft. After the dilerium that was Bong had passed, I found a healthier techniqa, very shallow auto rudder cutting in about 2 seconds before engine flood. This eliminated the accidental barrel roll because sensitivity to velocity change is less dramatic to further explain differences. I used to put rudder to glide position and would control its power at transition by timing changes from flood off. Now I don't use auto rudder for glide but merely to effect transition safely. Glide is controlled by stab tilt (It leads to ôther problems but is simpler than a three stage auto rudder). Galbreath used similar trimming techniques beautifully at Bong but I couldn't put two and two together then. (This follows my experience too: Editor)

Down thrust shown in drawing is excessive causing tendency to stair step in climb. Two degrees is better. I used 7 1/2 x 3 3/4 prop at Bong but went back to Cox 7 x 3.5 because engines are less critical at higher revs (or my engines are so sick they have to be unloaded). Best prop of all was single blade made from 8 x 3 Tornado Plasticote. Other single bladed props of various size shapes and pitch were disappointing. (Naturally these results may only be valid for my planes and engines and climb patterns.)

CG is too far back for best glide. Planked stabs are rugged but weigh 1.5 oz. Newer stabs of lighter construction help this situation. The CG is far from being on the razors edge but the glide sometimes is sluggish. Had wild results from using turbulators at 10% chord on wing nad stab. I placed 1/32 strip balsa, plane nege dived. I lowered balsa strips, ended up with 3/16" more decalage in stab and plane still nega dived. Haven't decided wether wing is lifting less or stab is lifting more, but will play around some more when snow

goes away.

Fin area is over generous and is being slowly reduced; however, I like an excess of fin for more consistent climbs (if I flew in a spiral, I couldn't get away with it.) (The Editor disagrees)

Forward fin on bottom of fuselage looks like hell but replaces the need for left side thrust. I would not like to trim this design without it. At first, glance, it seems inspired by Charlie Grant's old low CLA theories but its function is to balance the areas around the thrustline so that yawing forces from prop blast are cancelled. I could not achieve the results with rear fins alone and I was amazed that Galbreath could fly his Eros as straight away as he does so there must be trimming techniques that can bypass this problem. But for the average FAI flyer a forward fin gets rid of the pylon's agravating tendency to fall off to the right and go into a zooming cycle.

Incidently, the finger grip idea is great. Between it and generous sand paper on fuselage, bad launches are rare and arm power can safely be laid on with vigor.

I am dismayed by some of the wings used on FAI ships, a wet noodle has more torsional rigidity than some I've examined. I may have gone overboard but I like the solidness of geoditic and the way a hot ship will stay in trim month after month without worrying about treacherous little warps or wing flapping at high speeds. (Ed: Yeh, Yeh)

Chord wise planking on bottom gives tremendous resistence to twisting. I use balsa spars and have never had any trouble. Music wire in center is great DT shock absorber.

Airfoil shown could be improved with more generous arc in front and deeper "kicker" flap on rear. The "kicker" helps the thin section considerably in the glide and doesn't seem to hurt the climb. "Nemesis" has the more generously endowed airfoil (same thickness) and much to my embarrassement out glides the three newer ships despite their refinements.

Questions about contest preparations are embarrassing

because I've never been prepared, but I have good intentions for the future. Looking back on my past actions I find that I prefer building and experimenting over flying. Once I have a ship going, I lose interest in it and want to design something better (my best flying is done day-dreaming over a drawing board.) This, of course, is a hell of an attitude for a gung-ho contest man. But I resolve that as soon as my new super-duper design is flying, I'll switch to developing flying tactics and engine magic.

I would like to mention my initial test flying technique because it cuts fatalities to a minimum. My timer is modified so that two flood off type levers are released a second or two apart. Line to flood off and line to auto stab can be placed on either trigger, same one, etc., for any timing sequence. If ship does not use auto stab, a temporary DT type line to timer works fine. For ships that do not use flood off a special temporary mouse trap device can be installed so that the gadget timer can still be used for test flights. Plane is test glided and roughly trimmed. Any sign of turn is taken out. Line from stab and flood off are on same trigger. Timer is set for not more thanl 1/2 sec. Engine is run full bore and plane launched nearly straight up. Plane will DT and loop while engine cuts. With engine runs over 2 or 3 sec., timing stagger should change so that engine will stop several seconds before stab DTs; otherwise, weak wings fold up. Reason for simultaneous release on shorter runs is two fold; plane is not very high and any delay could prevent proper DT position before hitting ground; and if plane is not stable and is heading back to mother earth, any delay means hitting before DT pops. Many times I have seen this simple combination of timer, springs, and string eliminate hours of repairwork.

How do we build models in an apartment? It's not simple, but we have come up with a workable solution. The master bedroom is our workshop. One wall is nothing but shelves in a state of constant clutter. Opposite wall has Annie's room length plywood table that never has room for building. Old kitchen table supports styrofoam work board near center of room and ancient TV with world's worst picture tube jammed in doorway. It's all real cozy.

The Dodge Sportsman Van type wagon is just the ticket for airplanes. We have a big plywood box 80" x 48" x 12" that holds 7 FAI's with ease. It's nice to be able to throw a recovered plane in the back without having to take off the wing. Someday we plan to cut a hole in the roof so that a spotter can stand up and have unobstructed vision. But it has a drawback, on long trips it's a chore to keep it on the road and strong winds bounce it all over.

I didn't appreciate our flying conditions until I saw Bong. The Eastern flyers were raving about the wide open space and lack of trees. I was shocked because I had never seen so many obstacles on a flying field. In Denver, one 4' bush and a scragley tree a mile away seemed to make flying a hazard. The knee and waist high grass at Bong was a surprize. I couldn't get over the phenomena of a DTing ship disappearing, swallowed up without a trace, invisible 20 ft, away. Our prairie is hard dry and dusty and DTing ships shake the ground with a big whoop! But it looks better to me all the time. Nearby wheat fields can be a problem in mid season but we schedule most meets to avoid the mature crops.

Weather is cool and dry usually windy in spring and beautiful in Aug. thru Oct. Air is thin. Engine power is down about 20% but engines run cooler. I was completely caught off guard when my engines heat sagged at Bong. There are trimming problems, caused by thin air, possibly because of scale effect. Minimum sized stabs and fins can be tricky. Razor edge O O setups that fly at sea level may dive here, cure is to move CG forward and add decalage.

Bill, Thanks for the opportunity to contribute to Scatter. Hope you can salvage some legible material."

There are enough interesting features on this airplane to keep everybody thinking for some time. Sorry we don't have details about the auto- stab mechanism. Perhaps we can get Bill to draw it up for us some day.

Our comments on this airplane are: no matter how nicely designed and constructed, that 2 + oz. overweight is an unnecessary penalty. Take some weight off somewhere! Stab is heavy, wing OK but that fuselage has got to make with the Metrecal. The sub-fin makes a built-in stress concentration

at the front of the stab. Why not change its shape to a sub-dorsal so that it strengthens the fuselage in this region?

Airfoil's shown are are an interesting development and appear to be worth further evaluation. Auto-stab decalage change of 5/32 inch seems like a lot of movement. The Editors experience has been that 1/16 to 3/32 would be all that was needed. Perhaps other features and layout of "Neo Nemesis" account for this difference. In a forthcoming issue we hope to go into this aspect of FAI power design and trim and try to discover why these things happen.

Dick Black Indian Summer Postal Contest

The National Free Flight Society has organized another fun-filled spectacular open to all FF fans who are members of NFFS. Here is your chance to compare your times with the rest of the gang.

Don't forget though, if you are not members of NFFS send in your application along with your entry. Flights must be made in October. See the NFFS Digest for details or write:

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Coming - Next Month

Semi Finals ; What Happened?
Piggy- Backing; What Is It?
World Champs; Who did what?